

**State of North Carolina Department  
of Environment and Natural  
Resources** Division of Water Quality



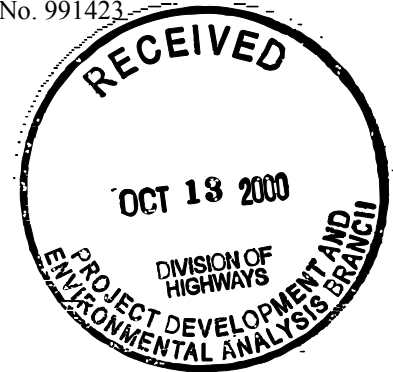
James B. Hunt, Jr., Governor Bill  
Holman, Secretary  
Kerr T. Stevens, Director

NORTH CAROLINA DEPARTMENT OF  
ENVIRONMENT AND NATURAL RESOURCES

October 2, 2000  
Graham County  
DWQ Project No. 991423

**APPROVAL OF 401 Water Quality Certification**

Mr. William D. Gilmore, P.E., Manager  
Planning and Environmental Branch  
North Carolina Department of Transportation  
P.O. Box 25201  
Raleigh, NC, 27611-5201



Dear Mr. Gilmore:

You have our approval, as described in your application dated September 23, 1999, your mitigation plan dated September 1997 (except where modified by the design drawings received March 13, 2000), your correspondence submitted July 21, 2000, your correspondence dated July 28, 2000, your design drawings for project 6.939004T received March 13, 2000, your monitoring plan dated August 2000, and in accordance with the attached conditions and those listed below, to place fill material in wetlands and streams for the purpose of constructing the Tulula Creek Wetland and Stream Mitigation Site in Graham County. The project should be constructed in accordance with your application dated September 23, 1999, your mitigation plan dated September 1997 (except where modified by the design drawings received March 13, 2000), your correspondence submitted July 21, 2000, your correspondence dated July 28, 2000, your design drawings for project 6.939004T received March 13, 2000, and your monitoring plan dated August 2000. After reviewing your application, we have decided that this fill is covered by General Water Quality Certification Number 3256. Certification Number 3256 corresponds to Nationwide Permit Number 27 issued by the Corps of Engineers. In addition, you should acquire any other federal, state or local permits before you proceed with your project including (but not limited to) Sediment and Erosion Control, Non-Discharge and Water Supply Watershed regulations. This approval will expire when the accompanying 404 permit expires unless otherwise specified in the General Certification.

This approval is valid solely for the purpose and design described in your application (unless modified below). Should your project change, you must notify the DWQ and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. This approval shall expire with the corresponding Nationwide Permit expires or as otherwise provided in the General Certification. For this approval to be valid, you must follow the conditions listed in the attached certification and any additional conditions listed below.

1. Upon completion of the project, the NCDOT shall complete and return the enclosed "Certification of Completion Form" to notify DWQ when all work included in the 401 Certification has been completed. The responsible party shall complete the attached form and return it to the 401/Wetlands Unit of the Division of Water Quality upon completion of the project.
- 2.) Upon completion of the project, the NC Division of Water shall be provided as built for the referenced project within 3 months of the project's completion.

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- 3.) Four permanent channel cross sections must be established. The cross sections must include two riffles and pools. All four channel cross section monitoring sites shall be approved in writing by the NC Division of Water Quality. Elevations of thalwegs, bank toes, bankfull benches, point bars, bankfull widths, and cross section areas must be surveyed and recorded and submitted to DWQ annually for five years.
4. The longitudinal channel profile must be surveyed, recorded and submitted to DWQ after the first year and every two years for the next four years. Thalweg, water surface, bankfull bench, and top of bank elevations should be surveyed and recorded for all pools and riffles.
5. Channel pattern must be measured and recorded and submitted to DWQ the first year, and every two years thereafter for the next four years. Measures must include sinuosity, meander wavelength, radius of curvature, and belt width.
- 6.) Pebble counts must be conducted, recorded, and submitted to DWQ on a yearly basis for the entire reach. The method utilized must be done in order to characterize the entire reach. Also, active channel and subsurface sediment analysis should be conducted yearly at the same riffle and the results should be submitted to DWQ on a yearly basis for a total of five years from the date of issuance of the 401 Water Quality Certification. The method should be submitted to DWQ for written approval within 3 months of issuance of the 401 Water Quality Certification.

Bank stability must be evaluated at two meanders bends. The sites shall be approved by the NC DWQ in writing. The evaluation must establish permanent toe pins at these bends to which to compare any lateral bank movement or failure. The banks must be evaluated and the results submitted on a yearly basis to DWQ for a total of five years from the date of issuance of the 401 Water Quality Certification. The locations and positions of the pins must be submitted to DWQ within 90 days of the issuance of the 401 Water Quality Certification for written approval.

- 8.) Photographs must be taken at the same location and orientation at four points (at the cross sections described in condition 3) and submitted to DWQ on a yearly basis.
- 9.) In addition to conditions 3 through 8, DOT will perform monitoring as described in the Stream and Wetlands Monitoring Plan dated August 2000.
- 11.) If the stream relocation becomes unstable, the stream shall be repaired or stabilized using only natural channel design techniques. Additionally all repair designs must be submitted to and receive written approval from the NC Division of Water Quality before the repair work is performed. If any portion of the relocated stream is used as compensatory mitigation for stream impacts, that portion shall be preserved in perpetuity through an easement or some other legally binding mechanism.

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